

backbone or the esters thereof, they are highly useful because the intended resin composites can be obtained simply and easily only by using an excess amount of precursors of the fatty acids (or by using a reduced amount of saccharic compounds), and hence preferable. Further, esters such as oleic acid triglyceride, which is a main component of food oil, and the fatty acids obtained by saponifying the above esters can also be used. This indicates that this invention is very useful as means for recycling waste food oil.

The resin composites of this invention can be synthesized easily using the above described components and the methods described below.

First, a polymer compound having a crosslinked structure is prepared by copolymerizing a saccharic compound and a bi-functional aliphatic derivative in a solution containing a plasticizer, if necessary, in the existence of a proper catalyst. At the time of this preparation, the plasticizer and the solvent are introduced into the gap in the three-dimensional network which consists of the polymer compound to be formed, and a gel is formed. Then the solvent and the disused are removed from the obtained gel by cleaning, drying, or other methods, to obtain the intended resin composite. Alternatively, the intended resin composite can be obtained by synthesizing the above polymer compound at lower molecular weight which has reactive

terminals (for example, acid terminals) in advance, kneading the low-molecular-weight polymer with the above plasticizer, and crosslinking the same by heating etc.

5 After the intensive investigation, the inventors found that, when forming the resin composite of the invention by copolymerizing a saccharic compound and a bi-functional aliphatic derivative, in order to allow the resin composite to crosslink so as to have
10 properties just as rubber, it is effective to use the bi-functional aliphatic derivative in excess of an amount that the saccharic compound requires. The inventors also found that in addition to the above method, the proper use of a poor solvent for the
15 polymer compound as a copolymer allows the optimal crosslinking to be easily derived. The poor solvents usable in such a case include, for example, acetonitrile, toluene, xylene and dioxane. These poor solvents can be used in combination with, for example,
20 N,N-dimethylformamide, which is a good solvent. As solvents used, desirably those making the dissolution and dispersion of a plasticizer satisfactory are properly selected and used in combination with each other.

25 Additives, such as coloring material, stabilizer and filler, may be added to the resin composite of this invention, according to its application.

Since the resin composite of this invention which is obtained as described above can be bound by heating and pressing, rubber-like molded form in a desired form can be obtained through, for example, compression
5 molding in a die. Further, since the obtained molded form can be cut with a cutter, the resin composite after molding forming can be made into various products by machining it in a desired form.

The molded form consisting of the resin composite
10 of this invention has elasticity and flexibility similar to those of the known rubber materials and causes a deformation in itself when pressure is applied thereto and recovers when the pressure is relaxed; therefore, it is suitably used for a shock absorbing
15 medium or for conveying and pressing rollers.

(Saccharification by Decomposition)

When utilizing used paper and vegetable lees produced during the pressing process of vegetables, as raw materials, if the used paper and the vegetable lees
20 are chemically decomposed, β 1 \rightarrow 4 linkage of cellulose contained in them as a constituent is cut off, and glucose (monosaccharide) and celooligosaccharides (di- to hexasaccharides) can be obtained as water-soluble components. The concrete processes of such
25 saccharification by decomposition include, for example, decomposition with acids such as dilute hydrochloric acid and dilute sulfuric acid, decomposition with